

**STATE OF INDIANA**

**Request for Proposal 21-66986**

**Respondent Clarifications Round 2**

**INDIANA DEPARTMENT OF ADMINISTRATION**

***On Behalf Of***

**The Indiana Department of Environmental Management**

***Request for Proposal Regarding:***

**Air DMS**

**Agilaire**

**Clarification Response Due Date: May 26th by 3:00 PM Eastern**

Stephanie Nelson, Senior Account Manager

Indiana Department of Administration

Procurement Division

402 W. Washington St., Room W468

Indianapolis, Indiana 46204

The follow items are requested of you:

**Clarification Questions:**

The State requests written responses to the following questions that were verbally asked during your oral presentation. All clarifications must be answered in writing and submitted by no later than the due date listed on page 1. Written responses should be submitted via email to Stephanie Nelson at [SteNelson@idoa.IN.gov](mailto:SteNelson@idoa.IN.gov).

1. With one (production) environment being identified, how are updates/enhancements tested post go-live? Even if all software changes are built into the main product with each customer having their own ‘features/menus’, where do customers test new releases? Where does training occur?

Managing Enhancements

Almost all existing AirVision agency users do not operate test environments (only two that we know of), as most delivered enhancements represent low-risk items (reports that don’t change data) or enhancements that are specifically designed not to affect existing data (e.g., enhancements like AV-Doc, etc). New functionality is always designed not to negatively affect any existing functionality, and often is additive and requires additional setup by the user to enable, if it would affect functionality (e.g., the enhancement to support use of the AirNow API’s ‘magic formula’ for ozone AQI forecasting requires additional configuration to elect this option- agencies who had existing settings to use the NowCast were not affected, and the NowCast is still supported). If the agency finds an additive feature unacceptable in some way, they can provide feedback for our next release, and not use the new feature (like the AirNow API).

Feature enhancements that would affect data and are applicable to all users (e.g., no disable option) receive stringent internal testing and are beta tested by volunteer beta test customers before general release.

In cases where a customer has identified an issue that is being resolved with a fix, Agilaire will receive an Export file of the complete customer’s configuration, with particular test data if needed (or using randomly generated data if the problem is not data-specific), allowing Agilaire to test the new version and confirm resolution of the reported issue before it goes into a published release.

Training

For this project, a more modest ‘sandbox’ hosted system can be provided as an option / change order, and decommissioned if IDEM determines the system to be of minimal value after a year or two of experience with AirVision and our release process / release controls.

For the initial training, we would have a copy / sandbox system (trainer’s computer), loaded with IDEM sites and parameters from the configuration information inquiry, and generated random test data (or imported AQS data, if provided). Some elements of training may revert to a standard test/training database to present specific concepts with a particular data set (e.g., an annual report).

For the secondary / follow-on training, the system should be fairly complete with polled and/or imported data, and this training would be done on a copy / sandbox of the IDEM database from a backup of the live system a few days prior to training.

For training competency testing, we would use a standard training test database, which would not be based on the IDEM system specifically, as the testing would cover concepts in a more general sense (and may test competency of features/concepts not yet implemented by IDEM at that point in the project).

Training for new features is generally provided by application notes and/or online tutorial videos covering new features. A few customers utilize support plans with additional hours of non-scope items for configuration and training (such a plan could not be structured into our RFP response).

*An excerpt of recent release notes and the nature of applicability of the above concepts are included as an appendix to this document.*

1. Has a customer ever had to roll back a change that was deployed to production? How was that handled?   
     
   There are cases of unsuccessful installations, based on a failure of the utility that updates the database schema. This is usually caused by a change to database permissions from IT, or perhaps a user has deleted a database element like an instrument driver that the schema update is trying to update or reference. The former case wouldn’t exist within an Agilaire-hosted system, and the latter case is managed in hosted systems by immediate rollback and mitigation by the Agilaire staff.

For self-hosted systems, even in those cases, a failed schema update leaves the database in the condition matching the previous version (e.g., the update effectively implements as a single transaction, so the failure of any piece of the update script leaves the database as is). The user needs only uninstall the new version and re-install the old version (Simple .msi installer) to be back in operation (~ 5 minutes).

For installations that complete successfully and an issue is identified later that required rollback- this is a very rare occurrence, and not one we could find in our records (any that existed were probably in the earlier days of the product and before we implemented our software tracking system in 2014). Most installation issues are identified at the time of installation by the various internal database constraints and checks.

For these cases (successful installation, but a significant issue presents itself) our update process prompts the user to perform a SQL database backup as part of the update (and would be performed prior to any update in the hosted system). Should an error or problem be observed, the SQL database backup would be restored, and the old version loaded as the active version. The SQL backup includes time records of the last successful poll / task execution time, so backpolling would occur to ‘catch up’ the restored database to current condition.

1. Are Clark County or Virginia using Agilaire existing tool for applying Slope/Intercepts to data or did this require an enhancement?

This feature is activated in the VADEQ system, but DEQ has indicated to us they do not plan to use the utility due to their shift to digital data collection, and would make adjustments, if needed, in the analyzers. They indicated they never used the tool in LEADS when LEADS was polling their old ESC 8816 loggers.

Clark County also has the tool enabled on their system, but indicates they have no plan to use the tool.

It is our belief that the adjustment process in LEADS is an artifact of the old analog input circuitry, subject to aging and temperature drift, and so constant compensation of mV to engineering units formulas were necessary to ensure stability for daily and weekly check results. The fact that VADEQ found the utility unnecessary, even when it was available in LEADS, is likely related to the design of the ESC 8816 analog section. The 8816 design had internal auto-calibration of the analog section and hardware/firmware to compensate for temperature and age drift over the lifetime of the unit- likely features that the Sutron analog section lacked (it’s considerably more expensive to build that analog section design). Also, the migration to digital data collection (as well as more modern and stable analyzers) for these agencies likely renders the need for constant data adjustments obsolete.

1. Will the AirVision be able to poll data concurrently with the LEADS? We are envision LEADS polling all sites until our contract ends with AirVision polling sites concurrently after each configure is completed and verified.

We can set AirVision to poll at particular polling time windows (e.g., if LEADS polls at 00:00 to 00:12, we can poll from 00:15-00:22, etc) to avoid conflict. If LEADS polls every 5 minutes, then offsets can be done as well in a more granular fashion (AirVision can control each poll task to the second), but it’s possible that a communication outage could cause backpoll times to overrun into each other’s time window. In AirVision we can set the ‘maximum backpoll time’ to limit this, but it could mean data gaps until the system is completely switched over (e.g., if we set the max backpoll time to 2 hours to avoid overrunning a LEADS poll, and there is a comms outage of 3 hours, we would only collect the requisite 2 hours and there would be a 1-hour gap).

There may be some potential logic to managing the Operator Log records if LEADS or the Xpert2 internally ‘flags’ records as collected and conflicts with AirVision trying to collect records already flagged as collected by the LEADS poll. More would need to be known about the Operator Log polling system to fully answer this definitively.

Appendix A – Release Note Excerpts and Examples of Risk Management (per Question 1).

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| **New Feature / Fix** | **Risk Management Method** |
| The precision set on parameters will now be applied to the values on the Site Health Report. | This was a fix that clearly resolved an issue affecting all users. Tested against test database system (issue cause identified and found not to be specific to any particular data case). |
| A Work Item rescheduling issue, when the next scheduled date landed on a day excluded in the item configuration, has been resolved. | This was identified using a customer’s database (our initial test did not have a reschedule date which fell on an excluded Saturday/Sunday). With the customer data, the root cause was identified, resolved, and retested. |
| The ability to add annotations has been added to the Calibration Data Editor. A Calibration Annotations report was also added to view the annotations. | This is an additive feature that customers don’t have to use if not desired. Data is stored in a separate table from regular calibration data, and so existing data cannot be affected. |
| A new utility setting is available that if set, will lock the date/time field of the Assignment History area of the Asset Tracking editor | This feature is additive and requires additional configuration to enable. The default in any system after upgrade is existing behavior. |
| A new executive service component (Stream Listener Service) has been added for support of instruments like the Thermo GM-5000 and Picarro. | Additive feature, requires additional configuration to enable the feature and set up the instrument. |
| Average Data Rollup now supports standard deviation and coefficient of variation for block type averages. Two were added to the general release (24h Coeff Of Variation & 24h Standard Deviation). | Additive feature, requires additional configuration to run. Existing rollups programs received functional testing to ensure their logic was not affected. |
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